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UNIVERSITY OF SAN DIEGO
Hahn School of Nursing and Health Science
DOCTOR OF PHILOSOPHY IN NURSING

NURSING EDUCATION IN COMPLEMENTARY ALTERNATIVE MODALITIES:
A CASE STUDY

by

Deborah Lynn Merriman-Bird

A dissertation presented to the
FACULTY OF THE HAHN SCHOOL OF NURSING AND HEALTH SCIENCE
UNIVERSITY OF SAN DIEGO

In partial fulfillment of the
requirements for the degree
DOCTOR OF PHILOSOPHY IN NURSING
May 2023

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DISSERTATION: Nursing Education in Complementary Alternative
Modalities: A Case Study

DISSERTATION

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Abstract

Purpose: The purpose of this embedded case study was to describe the preparation for and utilization of complimentary alternative modality (CAM) interventions by an experienced Doctor of Nursing Practice (DNP) prepared nurse practitioner (NP) working in an outpatient setting.

Background: Given the widespread use of CAM by the American public and the potential complications involved in combining CAM and standard medical care, a lack of educational preparation in CAM interventions by NPs delivering primary care in outpatient health care settings represents both a potential risk and a missed opportunity to provide holistic patient care. Such a lack of knowledge also constitutes a tremendous gap for NPs working in an outpatient health care setting to provide symptom management and comfort care to populations most in need of it, particularly palliative care patients.

Methods: Leininger's Theory of Cultural Care served as a sensitizing theory for the development of the two lines of inquiry of CAM education and utilization. A DNP-prepared NP with substantive knowledge of CAM and extensive integrating CAM into a primary care outpatient practice who met Yin's (2018) criteria for an embedded case study participated in an open-ended interview focusing on CAM as the phenomenon of interest. The six thematic steps developed by Braun and Clark (2006) were used in performing data analysis. These steps include data familiarization, generating initial codes, searching for themes, reviewing themes, defining/naming themes, and producing the report.

Findings: Five major themes emerged from the study's two lines of inquiry. Line of inquiry one (perception of formal CAM education throughout the participant's nursing

education) yielded the three themes of: (1) Extreme deficiency in CAM education at all levels of nursing education (deficiency); (2) CAM education as imperative in NP-level education (imperative); and (3) opportunities for improved CAM education (opportunities). Line of inquiry two (utilization of CAM as an NP in a primary care outpatient setting) yielded two additional themes of: (4) CAM as life-altering for patients (life-altering) and (5) importance of cultural collaboration (cultural collaboration).

Implications for Research: Data from this study support the need for future studies of level of CAM inclusion in nursing curricula, particularly at the NP level, and documentation of subsequent uptake of CAM interventions by practicing NPs.

Key words: nursing education, complimentary therapy, alternative therapy

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Dedication

As I finally complete the PhD that I've been working on forever, I want to make sure to give thanks where it's due: Dr. Georges, Dr. Connelly, Dr. Lisa Hawthorne, and Dr. Janelle Bird. I could go on forever regarding all you have done. Bless you! All of you helped make my dream come true.

I'm thinking of all the people in my life that mean something to me. You know who you are but special mentions to: Dennis & Maryanne Merriman, Cindy Fetting, Francine Wooten, Alexis, Lisa, Shirl and June Nelmark. Thank you for being there and for caring. Special prayers to my mom and dad, Barbara and Bill Merriman as well as to our son, Christopher, Grandma and Grandpa Bird. We think of you often and will never forget you. To my amazing children, James, Yao, Alicia, Janelle, and Forrest. I'm so grateful that God allowed us to be in your lives. You are the most loving, kind, and confident people I know. Your compassion for others humbles me. Without you I could never have completed my PhD. The world is truly a better place with each of you in it. You make a difference.

To my groom of 40 years, the journey with you has been a blast. You are and will always be the light of my life.

To all of my dear friends, forgive me if I missed you. You too have made a difference. With warmest regards and sincere thanks.

Acknowledgements

This research project would not have been possible without the financial support of the Hahn School of Nursing, University of San Diego, the Dean's Fund, the Patricia A. Roth Ph.D. Scholarship Fund, and the Kyle O'Connell Memorial Scholarship. Dr. Georges reviewed what I might qualify for, and I will be forever grateful to her. James and Janelle ensured that I could complete the program. From a shoulder to cry on to helping financially they did a great job!

The research for my thesis and importance behind it would not have been possible without the exceptional support and patience of my committee chair Dr. Jane Georges. Her enthusiasm, knowledge, and exacting attention to detail was amazing. She has been an inspiration and helped to keep my work relevant.

I would also like to express my deepest appreciation to my committee members: Dr. Lisa Hawthorne, who was there to listen- no judgment. Dr. Cynthia Connelly stepped in to help complete the process, and Dr Bird called twice a week- every week! Each of them provided great feedback and gave me the benefit of their time. I appreciate them for looking over my transcripts and answering the numerous questions that I had. Dr. Bird was exceptionally helpful in keeping me on track and well informed. She was an inspiration to me to keep going. To each of you—Bless you for your help!

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Chapter 1

Introduction

Nurses have used complementary and alternative modalities (CAM) almost as long as there have been nurses; it is “their heritage” (Snyder & Lindquist, 2001), and it provides a degree of autonomy in the practice of care delivery. The California Nursing Practice Act (NPA, 2023) defines the practice of nursing as those functions including "basic health care, that help people cope with difficulties in daily living. These difficulties are associated with their actual or potential health, illness, problems, or the treatment thereof, that require a substantial amount of scientific knowledge or technical skill including the following: direct and indirect patient care services (California Board of Registered Nursing [CBRN], 2023). These direct and indirect patient services include the competence of RNs to provide information about CAM, and to perform complementary and alternative procedures in accordance with the Standards of Competent Performance (CBRN, Section 1443.5, 2023).

Background of the Problem

Nurse practitioners (NPs) who hold the Doctor of Nursing Practice (DNP) are in a unique position to utilize CAM as part of their practice. DNP-NPs are becoming the primary providers of outpatient primary care in many settings, congruent with the 2011 Institute of Medicine (IOM) statement that nurses should be empowered to practice to the full capacity of their educational and training achievements (IOM, 2011).

Nevertheless, DNP-NPs are facing questions relative to understanding CAM modalities in which they may not have been trained and with which they may be unfamiliar. For example, DNP-NPs in outpatient settings are required to be familiar with the techniques

of massage, guided imagery, relaxation, and therapeutic touch, as well as the various herbal preparations and remedies that may interact with prescribed medications or services of the medical model.

Reasons people choose CAM as a substitute for or as an adjunct to conventional medicine are varied. They include dissatisfaction with providers or medical outcomes, side effects of drugs or treatments, high cost of conventional health care, and a feeling of not having control over one's own healthcare (Cuellar et al., 2003). With more and more Americans using various CAM services, it is incumbent upon NPs providing outpatient primary care to be familiar with these services to enhance and facilitate integration into the client's plan of care. NPs must also be able to identify any problems that may arise because of the combination of CAM and standard medical treatments (Shin et al., 2015).

Statement of the Problem

Given the widespread use of CAM by the American public and the potential complications involved in combining CAM and standard medical care, a lack of knowledge concerning CAM by NPs delivering primary care in outpatient health care settings represents a potential risk. Beyond risk, however, a lack of knowledge and utilization of CAM by front-line primary care providers represents a tremendous "missed opportunity" to create a collaborative therapeutic alliance with patients who are already using CAM. Such a lack of knowledge also constitutes a tremendous gap in the ability of an NP working in an outpatient health care setting to provide symptom management and comfort care to populations most in need of it, including palliative care patients. In addition, the context of a post-COVID19 pandemic renders the need for the symptomatic support of "long COVID" patients using CAM methods especially important.

The goal of this study was to use the embedded case study approach to describe to describe the preparation for and utilization of CAM interventions by an experienced DNP-prepared NP working in an outpatient setting. Findings from this study have the potential to provide an expanded understanding of the importance of adequate preparation in CAM interventions for DNP-prepared NPs and identify potential content needed in DNP program curricula preparing NPs to deliver primary care in outpatient settings. A embedded case study approach using Yin's (2018) methodology was necessary to capture the nuances and circumstances used by a "special case" DNP-prepared NP who actively uses CAM as part of practice delivery. Nurse practitioners delivering primary care need to expand their scope of knowledge and practice to meet patient needs with CAM, and academic faculty designing DNP curricula need a basis for planning CAM content to help their graduates do so. This study was undertaken to meet those needs.

Purpose of the Study

The purpose of this study was to describe the preparation for and utilization of CAM interventions by an experienced DNP-prepared NP working in an outpatient setting. Data was collected and analyzed using the embedded case study approach developed by Yin (2018). A DNP-prepared NP with substantive knowledge of CAM and extensive integrating CAM into a primary care outpatient practice who met Yin's (2018) criteria for a "special case" participated in an open-ended interview focusing on CAM as the phenomenon of interest.

Lines of Inquiry

The lines of inquiry guiding this study are:

1. To describe how an experienced DNP-prepared NP perceives the formal

education preparation in CAM received during her nursing education.

2. To describe how an experienced DNP-prepared NP utilizes CAM in an outpatient primary care setting.

Sensitizing Theory

Yin (2018) asserts that researchers approaching a case study do not do so in a vacuum. An implicit, sensitizing theoretical orientation is necessary in shaping an approach to the inquiry. A sensitizing theory can provide insight into what is going on in a field and in choosing what to observe and how to converse with participants (Yin, 2018, p. 34.) The researcher should consider multiple types of theories to provide this basis, including individual theories, group theories, organizational theories, and social justice theories (Yin, 2018). In addition to providing a theoretical orientation for undertaking the study, the sensitizing theory also plays a critical role in developing the implications for the use of study findings in research and practice.

For the purposes of this study, the Theory of Cultural Care originally developed by Leininger in 1978 was used as a starting point in approaching the inquiry. Subsequently, Leininger (1988) expanded her theory of nursing to encompass cultural care diversity and universality. The theory holds that cultural care provides the broadest and most important means to study, explain, and predict nursing knowledge and concomitant nursing care practice (Leininger, 1988). The theory is an appropriate sensitizing framework for this investigation into the use of CAM by advanced practice nurses, as it renders the choice and utilization of complementary/alternative interventions congruent with patient cultural context and expressed needs. The theory seeks to identify those patterns and processes which are needed to attain/maintain health and well-being in

the context of cultural care, which centralize the use of CAM in a personalized manner in a collaborative nurse-patient relationship.

Significance of the Study

Holistic care refers to approaches and interventions that address the needs of the whole person: body, mind, emotion, and spirit. Healing arts are those interventions that foster an individual's healing process; a return of the individual toward a state of wholeness in which body, mind, and emotional spirit are integrated and balanced, and the person can reach deeper levels of personal understanding. Healing does not equate to curing, although they can be synchronous.

The American Holistic Nurses' Association (AHNA) is a professional specialty nursing association dedicated to the promotion of holism and healing. The 2016 AHNA Position Statement on the Role of Nurses in the Practice of Complementary and Integrative Health Approaches (CIHA) states that nurses enter therapeutic partnerships with clients, their families, and their communities to serve as facilitators in the healing process. This partnership begins with being mindfully aware and present in all interactions at work and in life (AHNA, 2016). Furthermore, the Position Statement emphasizes that the holistic nursing care process supported by AHNA is one in which nurses are committed to acquiring and maintaining current knowledge and competency in holistic nursing practice, including the integration of CAM therapies into that nursing practice (AHNA, 2016). Thus, this study was undertaken to meet those goals by providing researchers with a baseline knowledge of how NPs delivering primary care utilize CAM and providing academic nurse faculty who design DNP curricula a starting pointing for the inclusion of CAM content to help their graduates do so.

Definition of Terms

The National Institutes of Health (NIH) National Center for Complementary and Integrative Health (NCCIH) states that the terms “complementary,” “alternative,” and “integrative” are continually evolving, along with the entire field of CAM research and practice. According to a 2012 national survey, many Americans—more than 30 percent of adults and about 12 percent of children—use health care approaches that are not typically part of conventional medical care or that may have origins outside of usual Western practice (NIH, 2008). When describing these approaches, both clinicians and patients often use “alternative” and “complementary” interchangeably, but the NCCIH (2021) defines the two terms as two different concepts. According to the NCCIH (2021) if a non-mainstream approach is used together with conventional medicine, it is considered “complementary.” Correspondingly, if a non-mainstream approach is used in place of conventional medicine, it is considered “alternative” (NCCIH, 2021).

For the purposes of this study, CAM are defined as the use of products and practices that are not part of standard medical care (NCI, 2023a). The National Cancer Institute (NCI) defines “standard medical care” as treatment that is accepted by medical experts as a proper treatment for a certain type of disease and that is widely used by healthcare professionals. In contrast, CAM may include such approaches as mind-body therapies (examples: meditation, biofeedback), biologically based practices (examples: botanicals, dietary supplements), body-based practices (example: massage, acupressure, acupuncture), and energy healing (examples: therapeutic touch, reiki; NCI, 2023a).

Assumptions

An embedded case study approach was chosen for this study. The embedded case

study methodology developed by Yin (2018) goes far beyond an exploratory function. In common with the qualitative descriptive approach proposed by Sandelowski (2000), the case study approach is designed to provide a “deep” representation of the participant experience or a social process (Yin, 2018). Thus, the assumptions of constructivist/naturalistic inquiry of investigating the phenomenon in its natural state informed this study (Lincoln & Guba, 1986; Yin, 2018).

Epistemological Assumptions

The epistemological assumptions underpinning the case study methodology include the assumptions of the researcher’s maintaining a strong professional competence, ensuring accuracy, and striving for credibility (Yin, 2018, p. 87). In this study, the researcher approached the investigation with extensive experience in the use of CAM as a registered nurse, sensitized by Leininger’s (1978, 1988) Theory of Cultural Care in planning and delivering nursing care which integrated CAM.

Methodological Assumptions

This embedded single case study meets the requirements stipulated by Yin (2018) for the representation of a contemporary phenomenon. Yin (2018) noted that two required elements (the “how” or “why” questions related to a contemporary phenomenon) are required to define the case. In this study, the “how” and “why” questions are central to the two lines of inquiry: (1) to describe how an experienced DNP-prepared NP perceives the formal education preparation in CAM received during her nursing education; and (2) to describe how an experienced DNP-prepared NP utilizes CAM in an outpatient primary care setting. Yin (2018) states that the embedded single case study design can significantly contribute to knowledge and theory building by

confirming, challenging, or extending a theory. Thus, the embedded single case study methodology was deemed appropriate to creating an initial knowledge base regarding the preparation for and utilization of CAM by DNP-prepared NPs.

Limitations and Delimitations

Prior to Yin's (2018) formal development of the case study methodology, many earlier social science textbooks failed to consider case studies as a formal method at all (Yin, 2018, p. 4). Yin (2018) asserts that such a hierarchical approach in which case studies are only considered exploratory in nature with no explanatory value is incorrect. While generalizability of case study data may be limited, nevertheless, data emerging from the case study methodology has the potential to provide exploratory, descriptive, and explanatory data when sensitized with an appropriate theoretical perspective. This study yielded data which provide both descriptive and explanatory data regarding a contemporary social process by analyzing interview data from a respondent who met Yin's (2018) criteria for a "key informant" having unique access to the phenomenon under study. Thus, the use of an embedded single case design, while limited in generalizability in the traditional empiricist paradigm, was an appropriate and useful approach in this study to elucidate descriptive and explanatory information about a contemporary social process.

Conclusion

Given the growing public interest in and self-administration of CAM interventions, this study focused on a salient gap in nursing knowledge regarding CAM education and delivery by NPs delivering primary care in an outpatient setting. Using an embedded case study design as defined by Yin's (2018) methodological structure, open-

ended interview questions informed by Leininger's (1978, 1988) Theory of Cultural Care were used to elicit data regarding two principal lines of inquiry: (1) to describe how an experienced DNP-prepared NP perceives the formal education preparation in CAM received during her nursing education; and (2) to describe how an experienced DNP-prepared NP utilizes CAM in an outpatient primary care setting. The following chapters contain a deeper explication of the study's background and significance, method, results, and discussion of implications for nursing research, education, and practice.

Chapter 2

Review of the Literature

The rapid changes in health care coverage in health care systems in the United States in the past decade, including the growing emphasis on palliative care and increased options for reimbursable treatment modalities, have resulted in amplified attention in CAM intervention. In addition to increased U.S. governmental changes in health care provision and practices for those with chronic conditions, there exists growing interest and public enthusiasm for CAM service options in treatment plans underwritten by health care insurance corporations.

As more consumers are embracing the use of CAM, nurses must keep pace if they are to continue to provide a holistic care model for clients with whom they interact (Fenton & Morris, 2003). It is incumbent upon all levels of nursing education to provide adequate education in CAM given the holistic nature of nursing. However, the enhanced preparation of NPs in CAM, particularly at the DNP level, is an especially significant need at the current time in which the provision of primary care is becoming increasingly delivered by NPs.

As complementary and alternative modality services become a greater part of the health care environment in a post-pandemic context, NPs delivering primary care must have a thorough understanding of CAM interventions, just as they would seek to gain knowledge regarding a new medications or devices to manage chronic conditions adequately. Programs preparing NPs for primary care, particularly DNP programs, are failing students if they do not provide them with adequate knowledge. Nurse practitioners delivering primary care need to expand their scope of knowledge and practice to meet

patient needs with CAM, and academic faculty designing DNP curricula need a basis for planning CAM content to help their graduates do so. This study was undertaken to meet those needs.

Sensitizing Theory

The Theory of Cultural Care was first explicated by Madeleine Leininger in her classic text, *Transcultural Nursing* (1978) and was used as a sensitizing theory in this study. Yin (2018) asserts that the use of an embedded, case study methodology requires an implicit, sensitizing theoretical orientation is necessary in shaping an approach to the inquiry. A sensitizing theory is useful in situating the researcher within contemporary practice and in choosing what to observe and how to converse with participants (Yin, 2018, p. 34).

A variety of sensitizing theories were considered in choosing a theory inform this study. Other health care theorists have given CAM a place in professional nursing practice as well. The Erickson, Tomlin, and Swain Theory of Modeling and Role-Modeling (Erickson, 2015) uses a process of modeling to guide the nurse to specific modalities. By entering the client's worldview, the nurse can adapt his or her care to the client's needs. The modalities of progressive relaxation, guided imagery, and hypnosis are some of the techniques that nurses can utilize to work within the framework of modeling and role-modeling (Tomey & Alligood, 2010). Roy's (2009) Theory of Adaptation, in which the concepts of focal, contextual, and residual stimuli are explored, enables the nurse to develop a framework for practice of such modalities as music therapy and aromatherapy to change the client environment from one that is unpleasant to one that produces relaxation and enhances emotional, behavioral, and physiological

healing (Frisch, 2001). While each of these theories contains valid elements relating to CAM in nursing practice, Leininger's (1978, 1988) theory was chosen as the most salient choice in guiding the specific lines of inquiry in a global fashion that encompasses patient, family, and wider cultural identities.

Leininger's Theory of Cultural Care

Dr. Leininger was a nurse scientist as well as an anthropologist, and the middle-range theory she created was among the first published works in the nursing literature to envision nursing care in the context of patient and family culture. The theory of nursing practice that encompasses the cultural needs of the ever-increasing diversity of America's client base (Campinha-Bacote, 2011). Leininger's (1978, 1988) model emphasizes the importance of "discovering generic (folk, local, and indigenous) care from the cultures" in providing care (Tomey & Alligood, 2010, p. 507). This "generic" care system incorporates both learned and traditional care models for a cultural group, but also the folk or "home based" knowledge and skills that are commonly used within the group for healing and wellness (Tomey & Alligood, 2010). Incorporating CAM into nursing care in keeping with traditional or cultural patterns is instrumental to providing culturally competent care.

A key concept in Leininger's (1978, 1988) theory is that of cultural care accommodation, in which the nurse can meet the cultural needs of the client by working within both the allopathic and CAM models to arrive at creative professional actions of nursing care (Frisch, 2001). Many cultures within the United States utilize healing modalities that clearly lie within the framework of CAM, such as acupuncture, Reiki, aromatherapy, yoga, and meditation. In addition, many of these modalities are culturally

based due to ethnicity, religion, or other ethnographic contexts (Frisch, 2001).

Advanced practice nurses must not only be aware of the cultural implications of these services, but also the concepts and practices informing these modalities to facilitate their incorporation into models of patient care (Campinha-Bacote, 2011). A deep understanding of these modalities is central to culturally competent care and quality patient outcomes. One of the major assumptions of the Leininger (1978, 1988) model is that “clients who experience nursing care that fails to be reasonably congruent with the client’s beliefs, values, and caring lifeways will show signs of cultural conflicts, noncompliance, stresses, and ethical or moral concerns” (Tomey & Alligood, 2010).

CAM modalities performed within the context of a sensitizing theory “take on meaning from within the theory” as the practiced modality becomes a purposeful action related to outcomes and goals within the nursing plan of care formulated from within a theoretical point of view (Frisch, 2001). Thus, the use of Leininger’s (1978, 1988) theory was particularly salient as a sensitizing theory for this study, as models of care provided by NPs providing primary care in the outpatient setting are holistic in nature, reflecting the overall orientation of nursing practice in a holistic paradigm. The Theory of Cultural Care provided a rich basis for shaping the lines of inquiry for the study and situating the researcher in a location informed by cultural context. In summary, Leininger’s (1978, 1988) theory was chosen as the sensitizing theory for this research study because it provides the most comprehensive approach to cultural competency as well as the conceptual rationale for NPs engaging in a holistic, allopathic approach to health care.

Review of Research

A review of relevant health care literature related to the overall themes of an

expanded definition of terms, an overview of selected CAM interventions and techniques, and documentation of CAM use in the United States is presented below.

Expanded Definition of Terms

While Chapter 1 provided a brief definition of terms used for this purpose of this study, the following expanded information is included here to provide an expanded understanding of the foci of the study. The term CAM has been defined largely in relation to conventional biomedicine. CAM services that are used instead of conventional medicine are termed "alternative." CAM services used alongside conventional medicine are said to be "complementary." "Integrative medicine" results from the thoughtful incorporation of concepts, values, and practices from alternative, complementary, and conventional medicines. "Complementary services," also known as "integrative services," encompass a broad spectrum of approaches and philosophies. Although many definitions exist, the National Center for Complementary and Integrative Health (NCCIH) of the National Institutes of Health (NIH) describes complementary and alternative medicine as a group of diverse medical and health care systems, practices, and products that are not presently considered to be part of conventional medicine (NIH, 2023).

The NCCIH (2021) has defined CAM as "a broad domain of healing resources that encompasses all health systems, modalities, and practices and their accompanying theories and beliefs, other than those intrinsic to the politically dominant health system of a particular society or culture in a given historical period." CAM includes all such practices and ideas self-defined by their users as preventing or treating illness or promoting health and well-being. Boundaries within CAM and between the CAM domain

and the domain of the dominant health system are not always sharp and fixed.

The NCCIH (2021) categorizes complementary services into five domains: alternative medical systems, mind-body interventions, biologically based services, manipulative and body-based methods, and energy services. Over 200 complementary services have been identified. These services can involve interaction with providers (e.g., massage therapists, chiropractors) or unsupervised use (e.g., self-care). Self-care remains the predominant method of delivery of CAM at the current time (NCCIH, 2021).

The NCCIH (2021) defines “alternative services” as complementary and other unconventional services that are used instead of conventional medical and surgical services. In contrast, CAM services are used together with conventional medicine. CAM include all such practices and ideas defined by their users as preventing or treating illness or promoting health and well-being. Finally, the NCCIH defines “integrative services” as the combination of mainstream medical services and CAM services for which there is some high-quality scientific evidence of safety and effectiveness (NCCIH, 2021).

For the purposes of this study, “holistic nursing practice” is defined as those approaches and interventions that address the needs of the whole person. Holism refers to the context or philosophy of care, rather than to a set of specific services. Nursing as a profession has long advocated a holistic approach to patient care that recognizes the integral link between mind, body, and spirit (Frisch, 2001). Therefore, it is particularly appropriate for NPs delivering primary care in an outpatient setting to engage in a model of care informed by holism, which includes the provision of CAM interventions.

Overview of Selected Interventions and Techniques

A complete overview of CAM interventions being used at the current time is

beyond the scope of this dissertation. An overview of selected interventions and techniques is provided to give the reader a more in depth understanding of widely used contemporary CAM approaches. Many heuristics exist for categorizing CAM interventions. For the purposes of this study, the five categories suggested by Millstine (2022) are used: (1) whole medical systems; (2) mind-body techniques; (3) biologically based practices; (4) manipulative and body-based therapies; and (5) energy therapies.

Whole Medical Systems

Whole medical systems are complete systems that include a defined philosophy and explanation of disease, diagnosis, and therapy. Some examples of whole medical systems include Ayurveda, Homeopathy, Naturopathy, and Traditional Chinese medicine. Expertise in using whole medical systems usually involves a great deal of preparation in both theory and practice of a particular system. This type of training usually takes a period of years, and while elements of such a system might be useful in NP outpatient practice, there is little documentation regarding NPs who have been educated in and/or utilized a whole medical system as the basis for their practice.

Mind-Body Techniques

Mind-body techniques have their basis in the theory that mental and emotional factors influence physical health. Thus, methods which are behavioral, psychological, and spiritual methods are used to promote health and decrease symptom burden. Such techniques include biofeedback, guided imagery, hypnosis, meditation, and relaxation techniques. An abundance of scientific evidence now exists which documents the effectiveness of mind-body techniques, and many of these approaches are now considered mainstream. Mind-body techniques are particularly salient to the current

study, as NPs in outpatient settings delivering primary care are in a key position to utilize them as a low-cost and easily taught self-delivered therapies. An exemplar of the successful deployment of mind-body techniques in outpatient settings include the work of Davis et al. (2023) in developing a mobile mindfulness smartphone app for post-traumatic stress disorder and alcohol use problems for veterans. These researchers found significant reductions in alcohol use, perceived stress, and enhanced emotional regulation in this study population. Other researchers have found similar successful results in other populations, including chronic pain (Hilton et al., 2017), depression (Hick & Chan, 2010), and anxiety (Hofmann et al., 2010).

Biologically Based Practices

Biologically based practices include botanical medicine, natural products and supplements, chelation therapy, and diet therapy. The Centers for Disease Control and Prevention (CDC; 2008) estimates that as many as 57.6% of U.S. adults aged 20 and over have used a dietary supplement in the past 30 days, with women aged 60 and over was at 80.2% of the population. The most used supplements were multivitamin-mineral supplements, followed by vitamin D and omega-3 fatty acid supplements (CDC, 2008). Given the broad diversity of therapies in this category, NPs providing primary care in outpatient settings need a strong evidence-based knowledge on both the efficacy of and potential pharmacologic interactions of such supplements. In addition, the widespread use of these substances renders provider-patient communication about their use and dosage extremely important.

Manipulative and Body-Based Therapies

Except for therapeutic touch, healing touch, and Reiki, most manipulative and

body-based therapies involve actual physical contact. The contact usually consists of the practitioner's touching, pushing, kneading, or rubbing the recipient's skin and the underlying fascia. Each of the therapies has an explanatory theory, body of knowledge, history, and techniques. Some techniques are derived from other methods and represent a synthesis of these approaches. Some methods require special licensure or certification, and others can be incorporated into a nurse's practice after minimal instruction via audiovisual media, conference, or classroom presentation.

Although they may be called by different names (e.g., Swedish massage, medical massage), many of the techniques of therapeutic massage are similar. Varying degrees of pressure and various types of oils or creams can be used, depending on client preference and the intention for the treatment. Therapeutic massage has also been referred to as "soft massage" and has been associated with helping the recipient reestablish balance and as a means to draw attention away from suffering (Jackson & Latini, 2023). Nurses have routinely performed therapeutic massage primarily on the backs and sometimes on the hands and feet of their clients.

Back care is not new; for decades, it was incorporated into the standard bathing and evening care routine of most hospitals. Because of time constraints and the increasing responsibilities placed on RNs in inpatient settings, even the provision of a bed bath to a hospitalized patient is becoming extremely rare. It can be posited that patients in contemporary inpatient institutions receive little- if any- of the complete range of touch therapies available for the promotion of comfort. While no data are available on the effectiveness of touch therapies in outpatient settings, it can be posited that providing even brief touch therapy by NPs delivering primary care could be of great value in

providing symptom relief and promoting a more positive provider-patient relationship.

Because no two clients have the same needs, the advanced practice nurse in the outpatient setting must become skilled at adapting the therapy to the setting and the time available. Massage techniques that can be performed quickly—massage for the hands, feet, or neck and shoulders—may have beneficial results in short time periods.

Energy Therapies

Energy therapies (also called energy healing) typically involve the placement of the practitioner's hands on or near the patient's body and use their energy to affect the energy field of the patient (Millstine, 2022). The NCI (2023b) defines energy therapies as a form of complementary and alternative medicine based on the belief that a vital energy flows through the human body. The goal of energy therapy is to balance the energy flow in the patient, which is believed to reduce stress and anxiety and promote well-being.

CAM practices including Reiki, Healing Touch, and other energy-based systems currently have a limited evidence base. Energy therapy currently is being studied in patients receiving cancer therapy to examine if it can improve quality of life, enhance the immune system, or reduce side effects of cancer therapies (NCI, 2023b). As more conclusive data emerge regarding the effectiveness of these therapies, NPs may find these modalities a useful therapeutic adjunct.

CAM Content within Nursing Curricula

The current degree and type of inclusion of CAM content within nursing curricula at all degree levels in the United States is an extremely under studied phenomenon. Multiple searches using applicable search terms such as “nursing

curricula,” “complimentary therapies,” “alternative therapies,” and “CAM education” resulted in very limited results, all of which were more than 10 years old. Some documentation exists regarding faculty and student beliefs and attitudes toward CAM (Halcón et al., 2003) as well as documentation of the centrality of CAM to NP practice (Sohn & Loveland Cook, 2002). However, no subsequent articles within the past decade were found on this topic in comprehensive searches across the health care literature. It is a notable gap in the nursing literature that no focused studies regarding CAM within nursing curricula at any level appear in this time frame.

CAM Use in the United States

The use of CAM in the United States is widespread. A 2008 National Health Interview Survey (Barnes et al., 2008) found that 38 percent of U.S. adults reported using CAM in the previous 12 months, with the highest rates among people aged 50 to 59 (44%). The NHIS data also revealed that approximately 42 percent of adults who used CAM in the past 12 months disclosed their use of CAM services to a physician (M.D.) or osteopathic physician (D.O.). Because many adults also use over-the-counter medications, prescription drugs, or other conventional medical approaches to manage their health, communication between patients and health care providers about CAM and conventional services is vital to ensuring safe, integrated use of all health care approaches.

Life Expectancy

The projected life expectancy in 2030 for men and women, respectively, is 81 and 87 years, according to the 2030 census (He et al., 2005). Approximately 90 million Americans are living with serious, chronic and life-threatening illnesses. This number is expected to more than double over the next 25 years with the aging of the baby boomers.

Statistics of significant health characteristics reveal that 80% of those 65 years of age and older have at least one chronic condition and 50% have at least two chronic conditions (He et al., 2005).

The most commonly treated illnesses in the U.S. population age 65 and older are heart disease, cancer, stroke, diabetes, renal disease, Parkinson's and Alzheimer's disease (CDC, 2008). Approximately 68% of Medicare costs are related to people with four or more chronic conditions (CDC, 2008).

Chronic Conditions and CAM

Chronic conditions limit activity for more than 40 million people (ACL, 2021). Consequently, it can be posited that many people with serious chronic illnesses will live a long time with that illness, and they will require supportive medical and nursing care along the spectrum. Thus, the need for CAM will increase and its integration with palliative care and conventional medical treatment will evolve. However, substantive barriers to the uptake and diffusion of CAM across primary care exist. A lack of adequate professional education regarding CAM in providers of primary care will continue to interfere with attempts at widespread CAM integration throughout the health care system.

Summary

CAM is a relatively new emergent specialty with little recent documentation of formal educational curricula either in medical schools or DNP programs. Approximately 6,000,000 people in the United States could benefit from CAM. By 2020, the number of people living with at least one chronic illness will increase to 157 million (CDC, 2008). Thus, a clear need exists for CAM to become a central facet in the training of primary care providers. The above review of the literature reveals a increasing need for CAM

with a growing documentation of the effectiveness of specific CAM modalities, particularly mind-body techniques and manipulative/body-based therapies. That such low-cost, therapeutically efficacious therapies are still not a major part of outpatient primary care suggests a strong need for this study, which sought to explore these two lines of inquiry: (1) how an experienced DNP-prepared NP perceives the formal education preparation in CAM received during her nursing education; and (2) how an experienced DNP-prepared NP utilizes CAM in an outpatient primary care setting. The subsequent chapters describe the methods used to explore these lines of inquiry, the results, and a discussion of the implications of these findings for future research and practice.

Chapter 3

Methods

The goal of this study was to use the embedded case study approach developed by Yin (2018) to describe the preparation for and utilization of CAM interventions by an experienced DNP-prepared NP delivering primary care in an outpatient setting. Results from this study have the potential to provide an expanded understanding of the importance of adequate preparation in CAM interventions for DNP-prepared NPs and identify potential content needed in DNP program curricula to provide adequate preparation in CAM delivery. This chapter describes the research design, the lines of inquiry, setting, participant description, data collection, data analysis, and human subjects considerations which guided this study.

Research Design

An embedded case study approach using Yin's (2018) methodology was used to capture the nuances and circumstances used by a "special case" DNP-prepared NP who actively uses CAM as part of practice delivery. A rationale for selecting a single rather than a multiple case design is that the single case can represent the critical test of a significant theory (Gross et al., 1971). This embedded single case study represents a specific contemporary phenomenon: a DNP prepared NP delivering primary care in an outpatient setting. Yin (2018) notes the two required elements (either "how" or "why") are required to define and bound the case. In this study, the two lines of inquiry met the criteria for defining a case: (1) how an experienced DNP-prepared NP perceives the formal education preparation in CAM received during her nursing education; and (2) how an experienced DNP-prepared NP utilizes CAM in an outpatient primary care setting.

Yin (2018) also asserts that the single case study design can significantly contribute to knowledge and theory building by confirming, challenging or extending a theory. In this study, Leininger's (1978, 1988) Theory of Cultural Care was used as a sensitizing theory. Thus, the methodology for this study was chosen specifically to contribute to the knowledge base regarding the education and utilization of CAM by a DNP prepared NP and subsequently extend the Theory of Cultural Care (Leininger, 1978, 1988).

The development of the embedded single case study is a relatively new addition in social sciences research. Prior to the development of Yin's work, the case study was often not considered a formal research method. It was viewed as an early, exploratory approach in preparation for subsequent formal research which would have explanatory value (Yin, 2018, p. 4). Yin (2018) asserts that such a hierarchical approach in which case studies are only considered exploratory in nature with no explanatory value is incorrect. Data emerging from the case study methodology has the potential to provide exploratory, descriptive, and explanatory data when sensitized with an appropriate theoretical perspective (Yin, 2018). The issue of "generalizability" which traditionally has been associated with empirical quantitative research is not applicable under this schema. Given the application of an appropriate sensitizing theory and the identification of an "embedded" key informant, the single case methodology can yield valuable descriptive and explanatory data. Both steps were taken in planning and performing this study, which are essential in assuming the "fidelity" of the data in Yin's (2018) schema. Thus, this study is strengthened by the methodological rigor added by the single-case, single-baseline design.

This study yielded data which provide both descriptive and explanatory data

regarding a contemporary social process by analyzing interview data from a respondent who met Yin's (2018) criteria for a "key informant" having unique access to the phenomenon under study. Thus, the use of an embedded single case design, while limited in generalizability in the traditional empiricist paradigm, was an appropriate and useful approach in this study to elucidate descriptive and explanatory information about a contemporary social process.

Lines of Inquiry

The purpose of this study was to describe the preparation for and utilization of CAM interventions by an experienced DNP-prepared NP working in an outpatient setting. The following two lines of inquiry were used in shaping seven open-ended interview questions:

1. To describe how an experienced DNP-prepared NP perceives the formal education preparation in CAM received during her nursing education.
2. To describe how an experienced DNP-prepared NP utilizes CAM in an outpatient primary care setting.

Setting

The setting for the performance of in-depth, focused interviews between the researcher and the participant was a digital interface using Zoom in locations in which privacy could be insured. Both researcher and participant were able to see and hear each other clearly. The interview was audio-recorded.

Participant

The participant/respondent was a nurse practitioner who had completed a DNP degree following an associate degree in nursing (ADN) and a Bachelor of Science in

nursing (BSN) with 20 years of experience in various levels of nursing care. She currently delivers primary care in an outpatient setting in a large city in Southern California and often utilizes CAM approaches in her practice. This participant was identified by clinical colleagues and others in the nursing community after personal inquiries were made by the researcher throughout the Southern California area for an NP meeting these criteria. Yin (2018) states that the identification of a “key informant” is an essential first step in undertaking the embedded single-case study approach. The researcher must validate that the participant is, in fact, considered by other members of his/her/their community to be both a reliable respondent and knowledgeable regarding the focus of inquiry. In choosing this specific “key informant,” all of Yin’s (2018) criteria were met.

Data Collection

An interview was conducted between the researcher and the participant using Zoom as a digital platform which took approximately two hours. Audio-recording of the interview was performed. An open-ended interview schedule with appropriate prompts was developed to explore the study’s two lines of inquiry. The following seven questions were asked as starting points:

1. Can you share a little bit of information about your background in medicine?
2. Do you feel the education and implementation of CAM is important to better the care of patients?
3. Was there a notable difference in the education of CAM you received in your registered nursing program versus your nurse practitioner program? If yes, can you provide an example?

4. Did you feel more prepared to assist in or be a part of a conversation with a patient involving CAM after you obtained your NP degree?
5. Did you have any experiences with a patient that resulted in a positive benefit by using CAM in conjunction with medical therapy as a registered nurse?
6. Are there any instances where you saw a positive effect with a patient using CAM in conjunction with medical therapy as a nurse practitioner?
7. Are there any recommendations you would suggest that would be more helpful in teaching CAM to nurse practitioner students?

Data Analysis

Following the transcription of the audio recording by the researcher, thematic analysis was performed. The six thematic steps developed by Braun and Clark (2006) were used in performing data analysis. These steps include data familiarization, generating initial codes, searching for themes, reviewing themes, defining/naming themes, and producing the report. An added step which Yin (2018) suggests is critical to ensuring the fidelity of thematic identification was the involvement of both the researcher and the participant in thematic analysis, particularly the steps of searching, reviewing, and naming themes. Both the researcher and the participant had multiple conversations in this process to arrive at themes and appropriate definition/names which accurately captured the essence of the participant's meaning.

Human Subjects Considerations

Upon consultation with representatives from the University of San Diego (USD) Institutional Review Board (IRB), a determination was made that this project did not meet the criteria contained in 45 CFR 46 or USD IRB Policy for human subjects

research. Specifically, this project met all additional 8 evaluation criteria for non-research and not-human subjects research projects stipulated by the USD IRB:

1. Implementing the practice outlined in the project will not incur participant harm.
2. The practice change outlined in the project is not new or novel and has been published elsewhere.
3. The practice outlined in the project will be implemented in a single project location.
4. The project does not test issues or add questions that go beyond common teaching practice.
5. The project will not randomize participants into different intervention groups.
6. The project will not deliberately delay interpretation of data.
7. The project will not deliberately delay or abbreviate feedback to those who would benefit from the findings to enhance likelihood of publication.
8. The project has no funding from an outside organization with a commercial interest in the use of the results.

This study did not involve the possibility of any participant harm. It expanded knowledge regarding a previously widely published issue, i.e., the inclusion of CAM in nursing practice and education based upon an embedded single case study from a key informant. The study was conducted in a single location, i.e., via Zoom in locations where privacy could be assured. The study did not test issues or add questions that go beyond common teaching practice. The project did not randomize participants into different intervention groups and did not deliberately delay interpretation of data. The project did not deliberately delay or abbreviate feedback to those who would benefit from

the findings to enhance the likelihood of publication. The project had no funding from an outside organization with a commercial interest in the use of the results.

While not constituting human subjects research per 45 CFR46, permission was sought from the USD IRB to perform this project. The participant gave verbal informed consent prior to the interview and was told the rationale for the study and the exact steps of participation. She was given the opportunity to ask any questions and discuss the project with the researcher. In addition, all data were cleansed of all personal identifiers and kept locked in a password-protected computer file. Only the researcher, the participant, and the dissertation chair viewed the transcribed interview data, and the digital files containing the interview will be held for a period of 5 years before being destroyed.

Limitations and Summary

Study limitations have been identified in the previous discussion of Yin's embedded single case methodology. The participant was chosen to meet all of Yin's criteria (2018) for a reliable and knowledgeable participant in a contemporary social process by conducting a community inquiry. The identification of themes was performed mutually by both participant and researcher, reducing the risk of personal bias of the researcher. As stated above, "generalizability" to larger populations regarding the data is a concept utilized in empirical quantitative studies relying on statistical significance. It is not applicable to this study, as the goal of the Yin's (2018) single case method is to expand or challenge a previous theoretical perspective. An appropriate sensitizing theory (Leininger, 1978, 1988) was chosen after a wide review of prior nursing literature and formed the basis for the construction of the lines of inquiry and subsequent data analysis.

In the following chapter, a presentation of the results illustrating the two lines of inquiry are summarized.

Chapter 4

Results

The purpose of this study was to describe the preparation for and utilization of CAM interventions by an experienced DNP-prepared NP working in an outpatient setting. Data were collected and analyzed using the embedded case study approach developed by Yin (2018). A DNP-prepared NP with substantive knowledge of CAM and extensive integrating CAM into a primary care outpatient practice who met Yin's (2018) criteria for a "special case" key informant participated in multiple open-ended interviews focusing on CAM as the phenomenon of interest.

The lines of inquiry guiding this study were:

1. To describe how an experienced DNP-prepared NP perceives the formal education preparation in CAM received during her nursing education.
2. To describe how an experienced DNP-prepared NP utilizes CAM in an outpatient primary care setting.

Description of the Sample

This study employed an embedded single case study approach as defined by Yin (2018) in which a "key informant" who meets the criteria of having unique access to the phenomenon under study and is considered a reliable and knowledgeable respondent by the larger community constituted the sample. The participant/respondent was a self-identified female Caucasian aged 35. She was able to speak, read, and write English. Her nursing education included a DNP degree, following a BSN and an ADN. She currently had 20 years of experience in various levels of nursing care delivery. She currently delivered primary care in an outpatient setting in a large city in Southern California and

often utilized CAM approaches in her practice. Her prior clinical experience included home health, palliative care, hospice care, primary care, and ambulatory surgical centers. She possessed expertise in cognitive disorders (i.e., Alzheimer's disease, dementia, traumatic brain injuries,) end-of-life care, wound care, and various post-surgical complications. Her background in caring for surgical patients included outpatient vascular, plastic, and general surgery. After becoming an NP, she worked collaboratively with a mobile physician specializing in primary care management, wound care, and active debridement. This position required the participant to function as both a primary care expert as well as a wound care specialist for complex and non-healing wounds.

This participant was identified by clinical colleagues and others in the nursing community after personal inquiries were made by the researcher throughout the Southern California area for an NP meeting these criteria. In addition, she was identified as an RN who had been through a continuum of nursing education programs, from an ADN to a DNP degree. Both her professional and educational experiences rendered her a "key informant" according to Yin's (2018) criteria for an embedded single case study, as she was uniquely positioned to address both lines of study inquiry, i.e., (1) perception of formal CAM education throughout her nursing education; and (2) utilization of CAM as an NP in a primary care outpatient setting.

Analysis of the Data

Once the interview was conducted, the researcher transcribed interview data personally from digital audio files. All identifying information was redacted from the transcript. Following the transcription of the audio recording by the researcher, thematic analysis was performed. The six thematic steps developed by Braun and Clark (2006)

were used in performing data analysis. These steps include data familiarization, generating initial codes, searching for themes, reviewing themes, defining/naming themes, and producing the report. An added step which Yin (2018) suggests is critical to ensuring the fidelity of thematic identification was the involvement of both the researcher and the participant in thematic analysis, particularly the steps of searching, reviewing, and naming themes. Both the researcher and the participant had multiple conversations in this process to arrive at themes and appropriate definition/names which accurately captured the essence of the participant's meaning.

After data familiarization, the generation of initial codes and thematic identification took place. The researcher shared the initial set of themes with the participant for accuracy validation. At this point, five general themes emerged that possessed robust data congruent with the study's two lines of inquiry. The themes are elaborated below organized by the lines of study inquiry, i.e., (1) perception of formal CAM education throughout the participant's nursing education; and (2) the participant's utilization of CAM as an NP in a primary care outpatient setting. The title of each theme is followed by a synthesized thematic focus concept in parentheses.

Line of Inquiry One

Theme One: Extreme Deficiency in CAM Education (Deficiency)

Data revealed three themes congruent with the first line of inquiry, i.e., perception of formal CAM education throughout the nursing education spectrum. The first theme was that of "Extreme Deficiency in CAM Education" at all levels of nursing education. This theme was illustrated in such statements as: "I honestly don't recall there being further discussion in my RN program about CAM other than 'don't take St. Johns Wart..."

and Coumadin is affected by dark leafy greens.”

That a program to prepare prospective RNs to pass the NCLEX Examination, which at the time did include required knowledge of CAM, had such minimal (and misleading) information in the curriculum is remarkable. The participant made no mention of what, if any, information regarding CAM was included in her BSN program. Even in her DNP program, content on CAM was minimal and delivered by a guest speaker with inadequate education or experience:

I do wish we had more opportunities in the NP course to get a little more in depth about CAM. We had a presentation discussing the importance and uses of naturopathic medicine and other CAM options but, unfortunately, the presenter was one that I believed may have fudged his education, his experience and professionalism.

Therefore, in an entire DNP curriculum, only one lecture session was devoted to CAM. It was not taught by a competent clinician and gave the listeners no substantive information about the integration of CAM into NP practice. It should be noted that the participant attended a DNP program from an AACN-accredited School of Nursing with high rankings on the U.S. News and World Report rankings systems for graduate programs in nursing. In addition, it was an entirely “in person” DNP program that maximized personal contact between faculty and students. It can be posited that if CAM is assigned such a minimal position in a highly ranked DNP program, it would follow that the more recently developed online DNP programs also provide a similar lack of CAM in the NP curriculum. In summary, this theme can be characterized as “deficiency” of CAM education at all levels of nursing education.

Theme Two: CAM Education as Imperative in NP-Level Education (Imperative)

The second theme that emerged in alignment with the first line of inquiry was the need for “CAM Education as Imperative in NP-Level Education.” The participant was extremely clear on the central importance of CAM in preparing NPs and the inadequate nature of her knowledge of a content area so important to primary care practice:

After graduating and beginning my NP career I still struggle with this (adequate CAM knowledge) and I am still learning...It is absolutely essential to know about CAM.

The participant identified her inadequacy in CAM as a continual struggle which often put her in clinical situations in which the best she could do was seek additional information from patients:

I used to worry so much about all the things that I didn't know until, of course, I had to accept the fact that no one knows everything. There's no way that you can know all possible interactions let alone what a patient is taking every day at all times. You just do the best you can and ask questions.

Thus, CAM content emerges as an important focus of NP practice that was “covered” by one lecture in an entire DNP program, leaving her with an enormous sense of lack in her preparation as an NP. In summary, this theme can be characterized as CAM education as “imperative” in NP curricula.

Theme Three: Opportunities for Improved CAM Education (Opportunities)

The third theme that emerged in alignment with the first line of inquiry was the enormous “Opportunities for Improved CAM Education,” particularly in NP programs. The participant gave a great deal of insight regarding specific opportunities which DNP

programs are “missing” and ways to meet these needs:

Well, if I were to do all of this over again with at least some of the knowledge I have now, I would love to have an additional course offered in our country’s NP programs ... focused on CAM.

She then outlines the content of such a course:

If I could have my dream come true regarding CAM therapy, I would have a course that covered commonly seen over-the-counter supplements and alternative treatments including expert presentations from physical therapy, occupational therapy, acupuncture, massage therapy, Reiki, and definitely a Naturopathic physician.

She followed up with an insightful remark about the nature of NP preparation and its focus on the medical model:

We need to focus on broadening our minds in medicine to see the patient as a whole and to not run towards purely medicating the issue without accessing all avenues of treatment.

Thus, the participant is identifying the enormous opportunities for NP education to return to its holistic roots within the nursing discipline, congruent with a holistic view of the patient that both Nightingale (1859) and Leininger (1978, 1988) situate nursing in. In summary, this theme can be characterized as “opportunity” existing for increased CAM education, especially at the NP level.

Line of Inquiry Two

Theme Four: CAM as Life-Altering for Patients (Life-Altering)

Data revealed two additional themes congruent with the second line of inquiry,

i.e., the participant's utilization of CAM as an NP in a primary care outpatient setting. The first of these themes related to Line of Inquiry Two (the fourth theme identified in the study) was that of "CAM as Life-Altering for Patients." This theme was illustrated in two especially rich narratives in which the participant expressed a sense of amazement at the difference that the utilization of CAM could make in quality of life. In the first narrative, she describes a patient receiving palliative care services:

My first visit through the door, the patient told me point blank that she was very interested in the end-of-life care act and would like to proceed with this. She had decided she wanted to die and wanted to do so on her own terms.

The participant goes on to describe her further assessment of the patient:

In this patient's case, I had a feeling that I wasn't seeing her true symptoms at baseline at that time and exactly the severity... as she had just returned home from the hospital from a very extensive and painful surgery...

She goes on to describe how she took the initiative to begin CAM interventions:

I took the initiative to connect with her naturopathic physician and we began working together to ensure the medication she was taking wouldn't interact with the medication's, supplements and IV infusion as she was receiving at her naturopathic clinic. We also worked together to coordinate lab draws to minimize her trauma and maximize her therapy.

She goes on to finish the narrative with a description of a positive outcome that she describes as "impressive:"

I truly feel that this joint effort as well as the patient's involvement was paramount in her ability to improve after such a difficult medical decline and

resulted in her discharging off palliative care six months later and in remission.

This may not always be the result of every case, but it was a very impressive improvement and will always stick with me.

In the second narrative, the participant relates how her knowledge of CAM saved a patient's life. The narrative begins with her description of a home visit to an elderly woman:

When I arrived at the patient's home, she was sitting in the front room complaining of a persistent upset stomach, weakness, dizziness, exhaustion, and nausea. She looked like she had lost weight as well. She had used Pepto Bismol but was still experiencing pain. She told me she hadn't changed anything or started any new medicine since we last met which had been a month prior.

Given the documented widespread occurrence of distressing gastrointestinal symptoms in the U.S. population, many primary care clinicians might have simply recorded these data and instructed the patient to continue her current regimen. But the participant goes on to examine the patient's environment:

I noticed a large vitamin bottle was thrown in the trash and when I asked if she was "putting anything else into your mouth, in your body or on your body that is not food or water" she told me she had started taking Arnica and Voltaren gel for her joint pain.

The participant went on to reflect:

Voltaren gel is an anti-inflammatory gel applied directly to the area of pain/inflammation. Arnica is an herb turned into tablet form and it acts similarly like aspirin. And, like aspirin, if you take too much of it, you can develop several

awful side effects including stomach ulcers and internal bleeding. Turns out she started taking extremely high doses of Arnica multiple times a day in conjunction with another strong prescription NSAID for her arthritis. She genuinely had no idea what the directions were supposed to be. She had no idea the dosage she was taking just that it was “4-6 tablets a couple times a day.”

The participant was able to determine that the patient was at high risk for gastric bleeding, and took immediate steps which may have saved the patient’s life:

I ended up sending her into the ER where we found she was experiencing internal bleeding. She was taking Pepto multiple times a day which turned her stools black, she expected her stools to be black as she had used this in the past, so did not notice bloody stools. She ended up needing a blood infusion, but we caught the problem in time that it didn’t require any further serious intervention.

In these two narratives, the utilization of CAM by an NP was life altering. In the first case, the utilization of CAM greatly enhanced a patient’s quality of life towards the end-of-life, and in the second narrative, the knowledge of CAM by an expert clinician saved a patient’s life. In summary, this theme can be characterized as the “life-altering” nature of CAM when utilized by an experienced clinician.

Theme Five: Importance of Cultural Collaboration (Cultural Collaboration)

The second theme related to Line of Inquiry Two (the fifth theme identified in the study) is that of the “Importance of Cultural Collaboration” in delivering CAM to patients. This theme is particularly resonant with the sensitizing theory which formed the basis for this study, i.e., Leininger’s (1978, 1988) Theory of Cultural Care. While a more complete description of the ways in which data from this study potentially expanded the

Theory of Cultural Care, this particular narrative illustrates the essential nature of consideration of the patient's culture when delivering CAM.

The participant begins the description of a patient who was diagnosed with terminal bowel cancer: "She was a mess, and her family was suffering along with her, seeing her in so much pain."

The severity of the patient's symptom distress seems overwhelming:

She was also experiencing sporadic abdominal muscle cramping that was so severe that the episodes usually caused her to either lose consciousness or begin heaving trying to vomit. Her partner was struggling to keep her pain under control let alone the other symptoms.

The participant recognizes that cultural identity is very important to this patient and her partner and takes the initiative to involve a culturally appropriate healer:

This patient was living on land next to a Native American community and was highly involved and supportive of their culture. After speaking with her partner, the hospice social worker and I worked together to bring in their shaman to assist in her care.

A working collaboration with the shaman brings about symptom relief to the patient:

The shaman came in with his wife who worked with her husband and also specialized in oils therapy. They used a combination of ritual healing, Reiki, oils, acupuncture, and aroma therapy to help her. Within an hour, my patient's hiccups were gone, and the muscle spasms had subsided.

The formation and maintenance of a therapeutic alliance with a cultural healer

made possible an end of life experience that brought peace and comfort to everyone involved:

They visited each day until she passed and worked with our team to calm the worst of her symptoms. This was one of the most all-encompassing transitions I have ever been a part of. We knew when she passed, she passed with peace, palliation, and the love of so many. If we hadn't been open as a team to the use of CAM I hate to think of how her passing would have been.

This statement by an experienced clinician who had, no doubt, seen the unnecessary agony with which many Americans face death, is a testimony to the power of CAM used in a manner congruent with the patient's cultural context. It demonstrates the theme of the importance of collaboration with culturally appropriate healers in doing so. In summary, this theme can be characterized as rendering "cultural collaboration" essential in utilizing CAM.

Summary

Using the embedded case study approach developed by Yin (2018), a DNP-prepared NP currently working in an outpatient primary care clinic served as a "key informant" in an open-ended interview designed to address two lines of study inquiry, i.e., (1) perception of formal CAM education throughout her nursing education; and (2) utilization of CAM as an NP in a primary care outpatient setting. The six thematic steps developed by Braun and Clark (2006) were used in performing data analysis. Data analysis revealed the following major themes which emerged under each study line of inquiry, along with a synthesized "thematic focus concept" in parentheses:

Line of Inquiry One. Perception of formal CAM education throughout the

participant's nursing education.

1. Extreme Deficiency in CAM Education at All Levels of Nursing Education (Deficiency)
2. CAM Education as Imperative in NP-Level Education (Imperative)
3. Opportunities for Improved CAM education (Opportunities)

Line of Inquiry Two. Utilization of CAM as an NP in a primary care outpatient setting.

4. CAM as Life-Altering for Patients (Life-Altering)
5. Importance of Cultural Collaboration (Cultural Collaboration)

The implications for each of these findings for nursing education, practice, policy, and future research will be described in the following chapter. An exploration of these specific thematic findings in the light of the study's sensitizing theory, the Theory of Cultural Care (Leininger, 1978, 1988) will also be presented.

Chapter 5

Discussion

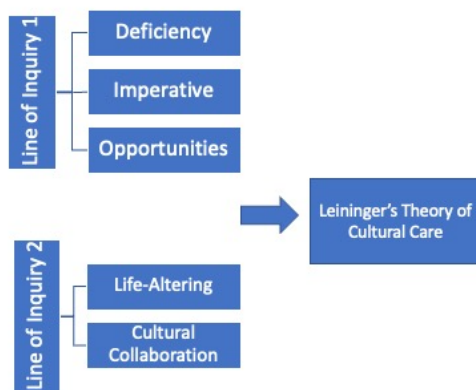
This study utilized Yin's (2018) approach of embedded single case methodology to describe the preparation for and utilization of CAM interventions by an experienced DNP-prepared NP working in an outpatient setting. Specifically, this method was chosen to provide deep insight by a "key informant" into a contemporary social process. The area of education and utilization of CAM by advanced practice nurses is an understudied area, and this study was designed to fill a gap in the current knowledge of a rapidly emerging focus of advanced nursing practice.

Summary of Findings

Following a thematic analysis according to the method described by Braun and Clark (2006), five major themes emerged across the study's two lines of inquiry from two lines of inquiry, which is depicted in Figure 1 as potential concepts to expand Leininger's (1978, 1988) Theory of Cultural Care.

Figure 1

Relationship of Study Lines of Inquiry and Themes to Leininger's (1978) Theory



1. *Line of Inquiry One.* Perception of formal CAM education throughout the participant's nursing education: Deficiency, Imperative, Opportunities.
2. *Line of Inquiry Two.* Utilization of CAM as an NP in a primary care outpatient setting: Life-Altering, Cultural Collaboration.

Upon reading the quotes which provide a robust support for each of these five themes, the reader is struck by the participant's tone of passion for connecting with patients and desire to relieve suffering within the context of a health care system based entirely on a medical model of pharmaceutical and surgical intervention. In repeated narratives, the participant speaks of the centrality of the utilization of CAM (Imperative) in providing powerful (Life-Altering) interventions, balanced by an honest self-disclosure of both the inadequacy of her nursing education and her own knowledge base (Deficiency.) Yet, she is optimistic that the current deficiency of CAM in nursing education and practice constitute a sizable (Opportunity) for nursing education and practice. The study's two lines of inquiry are interwoven at times, with repeated back and forth references to the relationship between the inadequacy of CAM preparation in nursing and the positive effects of its utilization. The theme of "Cultural Collaboration" is also interwoven into all narratives, with its most powerful exemplar being the story of a palliative care team collaborating with a Native American shaman. While not explicitly called out in her narratives about the delivery of CAM care in other populations, it is notable that every patient encounter narrative involves an assessment of the patient's entire context as a person within a cultural setting, even in such small details as seeing an empty medication bottle in the patient's trash receptacle. This definition of "culture" as an entire context is congruent with Leininger's (1978, 1988) conceptualization of culture.

Thus, “Cultural Collaboration” can be seen as an overarching theme that applies to all narratives regarding CAM described by the participant, beyond the utilization of a specific culturally specific healer.

Relationship to Prior Evidence

As described in Chapter Two, current documentation of CAM content in nursing curricula and practice is almost non-existent. This gap in knowledge is especially important to improve, given the widespread use of CAM by the U.S. population (NIH, 2008). The rapidly aging U.S. population with an expanded life expectancy which includes the management of multiple chronic conditions (CDC, 2008) renders CAM education and utilization in advanced practice nursing of great importance, but findings from this study reveal an enormous deficiency in both education of support for its use. Findings from this study verified prior evidence that a clear need exists for CAM to become a central facet in the training of primary care providers. The literature review in Chapter Two reveals an increasing need for CAM with a growing documentation of the effectiveness of specific CAM modalities, particularly mind-body techniques and manipulative/body-based therapies. Nevertheless, findings from this study suggest such low-cost, therapeutically efficacious therapies are still not a major part of curricular content in nursing programs at multiple levels and are utilized upon the personal initiative of a clinician in a technology-centered health care system.

Relationship to Leininger’s Theory of Cultural Care

This study utilized Leininger’s (1978, 1988) Theory of Cultural Care as a sensitizing theory, congruent with Yin’s methodological requirement for an implicit, sensitizing theoretical orientation to shape shaping the approach to the single case study.

A sensitizing theory is useful in situating the researcher within contemporary practice and in choosing what to observe and how to converse with participants (Yin, 2018, p. 34.) One of the major assumptions of the Leininger (1978, 1988) theory is that clients who experience nursing care that fails to be reasonably congruent with the client's beliefs, values, and caring lifeways will show signs of cultural conflicts, noncompliance, stresses, and ethical or moral concerns (Tomey & Alligood, 2010). Yin (2018) asserts that the embedded single case study has the potential to provide more than exploratory knowledge, but also can provide descriptive and explanatory knowledge which can enrich a theory.

Findings from this study did provide strong descriptive and explanatory knowledge of the ways in which CAM, particularly when used in "Culturally Collaborative" ways, can be "Life-Altering," thus validating Leininger's theory. Leininger (1978, 1988) focuses the need for adequate cultural competence in nursing, a focus borne out by the findings of "Imperative" and "Deficiency" in relation to contemporary nursing education regarding CAM. Ultimately, findings from this study demonstrate the enormous "Opportunity" which currently exists for nursing education to make Leininger's (1978, 1988) theory of patient-nurse cultural collaboration a reality. Currently, many nursing texts at multiple level approach "culture" as a list of what separate populations "believe" which the student then memorizes. A major critique of such texts is their lack of sensitivity to the multiple sub-groups which may comprise an entire population, e.g., Asian-Americans or Arab-Americans. Instead of a pedagogy of lists, findings from this study suggest that a curriculum which focuses on patient-provider communication in mutually choosing appropriate CAM interventions might provide a more effective

approach to meeting diverse patient's needs. Thus, this study provides support for the expansion of Leininger's (1978, 1988) theory to guide the integration of CAM interventions in nursing education and practice.

Conclusion

Line of Inquiry One. Perception of formal CAM education throughout the participant's nursing education: Deficiency, Imperative, Opportunities.

While this study was not designed as empirical documentation of the status of current CAM education throughout the United States, the three themes of perceived Deficiency, Imperative, Opportunities by an experienced clinician suggest that CAM education is perceived as inadequate, important, and open to improvement in contemporary nursing education.

Line of Inquiry Two. Utilization of CAM as an NP in a primary care outpatient setting: Life-Altering, Cultural Collaboration.

Similarly, while this study was not designed to document the effectiveness of specific CAM interventions within patient populations, the two themes of Life-Altering and Cultural Collaboration described by an experienced clinician suggest that CAM interventions constitute a robust area for future study regarding both their usefulness when implemented in a culturally collaborative manner.

Discussion

Findings from this study suggest that low-cost, therapeutically efficacious CAM interventions are still not a major part of curricular content in nursing programs at multiple levels and are utilized essentially upon the personal initiative of a committed clinician in a technology-centered health care system. These findings are congruent with

anecdotal evidence regarding the dearth of CAM modalities as integral parts of palliative and end-of-life care. Nevertheless, the five major themes (Deficiency, Imperative, Opportunities, Life-Altering, Cultural Collaboration) constitute a starting point for nurse academicians, practitioners, and researchers to plan and institute change. As insurance corporations become increasingly focused on resource allocation, the introduction of such low-cost interventions, particularly via digital technology, may become extremely attractive options. Recently, Southern California Kaiser Permanente (2023) instituted a system-wide CAM interventions to all members using a smart phone application designed to provide a mindfulness intervention in an accessible and simple manner. It can be anticipated that similar efforts will be developed in the future. Nevertheless, findings from this study point to the importance of instilling the knowledge of such CAM approaches in primary care providers who are positioned to collaborate personally with patients in choosing individualized CAM interventions. An application on a smartphone, while inexpensive to deploy to a large patient population, is not equivalent to the individual patient-provider relationship which findings from this study suggest is needed for CAM interventions to be life-altering or culturally appropriate.

Limitations

Generalizability to larger populations regarding the data is a concept utilized in empirical quantitative studies relying on statistical significance. It was not applicable to this study, as the goal of the Yin's (2018) single case method is to expand or challenge a previous theoretical perspective. An appropriate sensitizing theory (Leininger, 1978, 1988) was chosen after a wide review of prior nursing literature and formed the basis for the construction of the lines of inquiry and subsequent data analysis. The participant was

chosen to meet all of Yin's criteria (2018) for a reliable and knowledgeable participant in a contemporary social process by conducting a community inquiry. The identification of themes was performed mutually by both participant and researcher, reducing the risk of personal bias of the researcher. Thus, every effort was made to expand a previous theoretical perspective while ensuring fidelity. While these study findings cannot be considered prescriptive or applicable to a larger population, they do constitute a starting point for further research.

Implications for Nursing Education

The first line of inquiry for this study was the perception of formal CAM education throughout the participant's nursing education. Exploration of this line of inquiry yielded three central themes, i.e., Deficiency, Imperative, and Opportunities. These themes constitute a starting place for nursing academicians considering the inclusion of enhanced CAM content in program curricula at multiple levels. The participant was clear in stressing the absolute necessity for its inclusion and described her DNP program as containing a one-hour presentation on the topic. While the participant supported the inclusion of an entire course on CAM in DNP programs, it can be posited that given the imperative nature of CAM information identified in the study, an entire course as well as CAM inclusion in every course may be a useful strategy. A deficiency in CAM content was identified at all levels of nursing education, with an exemplar of minimal/incorrect information being given in a pre-licensure program. Pre-licensure as well as post-licensure programs in nursing should consider including substantial CAM information as part of symptom management content.

Implications for Nursing Practice

While this study was not designed with a prescriptive purpose, findings do suggest that the themes (Life-Altering, Cultural Collaboration), which emerged from Line of Inquiry Two (Utilization of CAM as an NP in a primary care outpatient setting) may be a starting point for nurses at all levels/settings who are considering integrating CAM into their practice. Again, this study was not designed to measure or “separate out” the effect of provider engagement from a specific CAM intervention, but the findings do suggest that the combination of both have the potential to be life-altering in the patient experience. Nurses who are considering adopting CAM wish to consider the potential life-altering potential of a mutually chosen CAM intervention in a culturally collaborative manner.

Implications for Policy

Reimbursement for CAM interventions remains minimal and scattered in its availability across states, but recent federal legislation to cover some elements of CAM for hospice patients constitutes a promising starting point. A rapidly aging voter base may force legislators to consider enhanced reimbursement for CAM as a low cost and preferable alternative to high technology interventions. Nevertheless, the power of large pharmaceutical companies in shaping U.S. health care reimbursement remains a considerable barrier to policy change. It may be that the rapidly aging generation born between 1945 and 1960 may once again become a key political force in effecting change by demanding reimbursement for CAM. The Internet may also play a considerable role in raising awareness of the voters that reimbursement for low-cost, effective interventions with minimal side effects are currently being withheld from them by a political system

dominated by corporate interests.

Implications for Future Research

Findings from this study should be considered both exploratory and explanatory in shaping future research in this area. The findings suggest that a large need exists to insert CAM into nursing curricula and to transform CAM from a lone clinician initiative to an integral part of overall care. Both lines of study suggest the need for pedagogical research- both qualitative and quantitative- on creating best practices for the inclusion of CAM at multiple levels of nursing education. Studies which examine the effect of including CAM as a normalized and essential part of patient care will require multiple and large quantitative studies showing a valid and reliable effect from various CAM interventions in specific populations. However, many such studies are currently underway, particularly in the cancer population (NCI, 2023a). It can be hoped that future research endeavors, both qualitative and quantitative, will bring a growing consensus in the scientific community of the value and effectiveness of CAM approaches.

Summary

This study utilized an embedded, single-case approach according to the methodology developed by Yin (2018). This method was chosen specifically to provide deep insight by a “key informant” into a contemporary social process. The study focused on two principal lines of inquiry, including perception of formal CAM education across multiple levels of nursing education and current utilization of CAM in an outpatient NP practice. The study was sensitized by Leininger’s (1978, 1988) Theory of Cultural Care. The study’s findings indicate it achieved Yin’s (2018) endpoint of the embedded single case study of enlarging a theoretical perspective, particularly in its validation of the

centrality of cultural collaboration in the utilization of CAM by advanced practice nurses. Thus, Leininger's (1978, 1988) Theory of Cultural Care was a useful starting point in planning the study and a valuable endpoint in analyzing and exploring implications study findings. Ultimately, the study supports the stances that CAM is both inadequately covered in nursing curricula and has untapped potential for its utilization in advanced practice nursing. Given the need for low-cost, accessible strategies for symptom management, CAM represents an important focus for future study.

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Appendix A

University of San Diego Institutional Review Board Approval



May 2, 2023

Deborah Bird
Hahn School of Nursing & Health Science

Re: Initial - IRB-2023-392 Nursing Education in Complementary Alternative Modalities: A Case Study

Dear Deborah Bird:

The Hahn School of Nursing & Health Science faculty representative(s), as an official part of the University of San Diego Institutional Review Board (USD IRB), have reviewed your application and rendered the decision below for IRB-2023-392: Nursing Education in Complementary Alternative Modalities: A Case Study.

Decision: Non-research or Not-human subjects research. This study may start no earlier than May 2, 2023.

Findings: This application has been reviewed and certified by the corresponding unit's IRB Org Approver(s).

Research Notes: Though certified as either non-research or not-human subjects research, the project team should ensure that the activities associated with the project are conducted in compliance with applicable USD policies and ethical standards as well as local, state, and federal regulations.

Internal Notes:

This approval is based on the intended work and scope of activities outlined in the submitted proposal. If the research team makes changes to the project and/or its study protocols, the PI or their designated team member must submit a modification application for IRB's re-evaluation.

The USD IRB requires annual renewal of all active studies reviewed and approved by the IRB. Please submit an application for renewal prior to the annual anniversary date of initial study approval. If an application for renewal is not received, the study will be administratively closed.

Note: We send IRB correspondence regarding student research to the faculty advisor, who bears the ultimate responsibility for the conduct of the research. We request that the faculty advisor share this correspondence with the student researcher.

Applications for full review must be submitted at least two weeks prior to the next scheduled monthly IRB meeting; see <https://www.sandiego.edu/irb/updates/> for specific deadlines. You may submit an IRB application for expedited or exempt review at any time.

Sincerely,

Hahn School of Nursing and Health Science IRB Org Approver(s)

Institutional Review Board
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